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ABSTRACT

A ten item questionnaire dealing with parental family income, the legalization of marijuana, pollution, and a volunteer army was administered to the entering freshman class on September 6, 1970. The results indicate that the freshmen tend to underestimate the actual earning power of their fellow students' families by approximately $1,800. However, their actual feelings about marijuana and the volunteer army were extremely close to their estimates of what the general freshman class felt about those particular topics. The most surprising result of this study was the remarkably high concern about the Federal Government's involvement in pollution control and yet the relatively low agreement that one of the prime causes of air pollution, the internal combustion engine, should be banned from the highways. Suggestions are made about using the questionnaire approach to establish student attitudes on current problems and topics. (Author)

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Student Attitude Inventory

by

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Abstract

A ten item questionnaire dealing with parental family income, the legalization of marijuana, pollution, and a volunteer army was administered to the entering freshman class on September 6, 1970.

The results indicate that the freshmen tend to underestimate the actual earning power of their fellow students' families by approximately $1,800. However, their actual feelings about marijuana and the volunteer army were extremely close to their estimates of what the general freshman class felt about those particular topics. The most surprising result of this study was the remarkably high concern about the Federal Government's involvement in pollution control and yet the relatively low agreement that one of the prime causes of air pollution, the internal combustion engine, should be banned from the highways.

Suggestions are made about using the questionnaire approach to establish student attitudes on current problems and topics.

Student Attitude Inventory[1]

The difficulty in obtaining current and relevant information on topics or problems which arise every day is one of great concern to the academic community. Quite often decisions are made on heresay evidence or simply the feelings of one or two not necessarily representative individuals. In an attempt to try out a new vehicle of obtaining information on attitudes and feelings towards current topics or problems, the Measurement and Research Division of the Office of Instructional Resources constructed a ten item Student Attitude Inventory to be administered during the freshman College Diagnostic testing session in September, 1970. Through this questionnaire it was hoped that information could be obtained on student feelings and perceptions about current concerns, such as drug use, pollution, etc. In addition, it was felt that the responses of the students to these questionnaires could be tabulated relatively quickly and presented back to the student population and academic community at large for their own information. Successful accomplishment of this goal would, therefore, indicate that a questionnaire approach could be used to gather valuable information and use it in decision making.

Although there were many different topics and problems that could have been addressed in the questionnaire, a few were selected that appeared to be representative or pertinent at that time. One problem dealt with the total income of each freshman's parental family and what their perception was of the general freshman group's parental income. A second problem dealt with marijuana and whether or not it should be legalized. Another area under question was pollution and its controls. The final problem

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[1]The author is indebted to Susan J. Feldman and David Eisenman for their valuable contributions.

focused on the armed forces and whether or not it should become a voluntary operation. The questions were formulated and posed in such a way that the student would first answer a question directly with respect to his own feelings, and then in the following question he would estimate what the answer to that same question would be by the rest of the freshman group (see Appendix A).

Method and Results

This questionnaire was administered to 4,366 entering freshmen at the University of Illinois as part of their diagnostic testing on September 6, 1970. The results as tabulated will be summarized below:

The first question asked, "What is your best estimate of the total income last year of your parental family (before taxes)?" The freshmen, in answering that question, indicated that the mean and median yearly income of their parental family was approximately $16,900 and $14,720, respectively, which was in the response interval of $14,000 - $19,999. The range of yearly income went from $4,000 to over $32,000, according to the freshman responses (see Appendix A). When the freshmen were subsequently asked to estimate the average income of the total freshman class, their mean estimate came out as $15,050 per year, approximately $1,850 less than the freshmen actually reported, but the median estimate was approximately $12,839, which was $1,881 less than the freshmen actually reported. A Pearson product-moment correlation between the responses to questions one and two presented in Table 1 was .41, indicating moderate degree of agreement between what each freshman felt their

parents' mean and median yearly income was and what they perceived to be the parents' mean and median yearly income of the entire freshman class.

Table 1

Correlations by College and Total Freshmen for Paired Questions

College and Total Freshmen	N	Paired Questions			
		11 vs. 2	3 vs. 4*	6 vs. 7	8 vs. 9*
Agriculture	364	.56	.43	.50	.37
Commerce and Business Administration	305	.38	.17	.32	.23
Education	76	.53	.36	.53	.43
Engineering	841	.37	.49	.52	.34
Fine and Applied Arts	412	.44	.46	.38	.36
Liberal Arts and Sciences	2,091	.37	.36	.42	.25
Physical Education and Aviation	130	.57	.44	.49	.33
Total Freshmen	4,220	.41	.39	.45	.29

*This column contains point biserial correlations, whose maximum value approaches approximately .80.

The question which asked the students to agree or disagree with the statement that marijuana should be legalized drew 49% agreement and 46% disagreement; 5% chose not to answer. The subsequent question asking the freshmen to estimate what percentage of the freshman class would agree that marijuana should be legalized indicated that they perceived 50% of the freshman class would agree that marijuana should be

legalized. The results here are amazingly close and indicate that the students as a whole are quite aware of the group feeling on this issue. A point biserial correlation of .39 between the two questions was observed and is considered to be relatively high as it represents a correlation between a dichotomous and continuous variable. This, therefore, would also indicate that the students' perceptions of the group feeling on marijuana is fairly close to their own. When the responses to question 4 were summarized with respect to the responses on question 3 (see Appendix B), the results indicated that those who agreed with question 3 perceived a significantly higher percentage of freshmen wanting to see marijuana legalized than those who disagreed with question 3.

A single question was asked concerning whether or not controlling pollution should be a prime concern of the United States Federal Government. In response to that question, 92% of the students agreed that controlling pollution should be a prime concern of the Federal Government. Following that question, the students were asked if all internal combustion engine vehicles should be banned from the highways in order to prevent further air pollution. Only 42% agreed with that statement. When asked to estimate what proportion of the freshman class would like to see all internal combustion engines banned from the highways to prevent air pollution, they estimated 26% agreement with that statement. Here again, it appears that there is a large difference between what they would actually agree with and what they perceive

the rest of the freshman class would agree with. A Pearson product-moment correlation between the two questions was .45 indicating a moderate degree of agreement. The fact that there was a significant increase in the perceived percentage of freshmen wanting to see the internal combustion engine banned from the strongly disagree to the strongly agree response on question 6 (see Appendix B) indicates that those who were most concerned also perceived the strongest concern.

A final question posed to the students that only volunteers should serve in the armed forces, to which 64% of the freshmen agreed. In the following question, asking to estimate the percentage of the freshman class that would agree with that same statement, they estimated 66% would agree with that statement, another amazingly close estimate to what the group as a whole actually felt. A point biserial correlation of .29 indicates a moderate degree of agreement between perceived and actual feelings on the armed forces issue. Once again, the freshmen who agreed with question 8 perceived a significantly higher percentage of the freshmen group agreeing with question 9 than those who disagreed with question 8.

Discussion

In looking over the results of this study, it is interesting to note that the students' actual feelings about marijuana and the volunteer army are extremely close to their estimates of what the general freshman class felt about those particular topics. Another interesting point is that the freshmen tend to depress the actual earning power

of their fellow students' families when estimating the average total yearly income for the parental family. This might be due, in a large measure, to the effects of cost of living and inflation with respect to being able to actually estimate what the yearly income of the families would be. It is also possible that the students are not cognizant of what makes up the parental family income.

The most surprising result to this investigator was the remarkably high concern about pollution with respect to the Federal Government's involvement and yet the relatively low agreement that one of the prime causes of air pollution, the internal combustion engine, should be banned from the highways. There are many reasons for the potential disparity in these results. One could be that the students are more concerned with other sources of air pollution than that precipitated by the internal combustion engine, and secondly, maybe the banning of that engine is less desireable than changing the type of fuel used, etc.

Looking at the results in another way, it is interesting to note that the pattern of responses in estimating the feelings of the freshman class are remarkably close to the true state of affairs when they are estimating positions on drug use (via marijuana) and a volunteer army. However, this was not true about banning the internal combustion engines, and one of the most obvious reasons could be that the legalization of marijuana and an all volunteer army are topics that have been discussed so often that the students, in general, may

know the position of their fellow students and therefore, can estimate it much better than they can on pollution. The fact that students who agreed with the questions posed also perceived a higher percentage of freshman agreement should not be too surprising as most of us are wont to project our feelings to others.

Summary and Conclusions

In looking over the results of the Student Attitude Inventory, it appears that only in certain cases can students very accurately perceive the positions of their peers. In other cases, they cannot or choose not to. The present study suggests that there is enough disimilarity in general versus specific opinions to indicate that whenever student feelings on topics are assumed to take a particular position, it would behoove us to use some sort of questionnaire to get an actual assessment before going ahead and making decisions which could affect the general student population. In particular, topics such as released time for elections, ILLIAC IV, etc., are all ones that could have been treated in this way, and the controversy about whether or not the small vocal group really represented the students in general could have been determined relatively quickly. In conclusion, it should be pointed out that an accurate assessment of student opinion could be obtained without questioning the entire student population. However, great care must be taken in selecting the sample to be polled in order that it truly be completely representative of the total group.

Appendix A

STUDENT ATTITUDE INVENTORY*

THIS INVENTORY IS DESIGNED TO OBTAIN YOUR ATTITUDE TOWARDS SEVERAL CURRENT CONCERNS AND ALSO TO SEE HOW ACCURATELY YOU CAN PREDICT THE ATTITUDES OF THE REST OF THE FRESHMEN CLASS. THE RESULTS WILL BE PUBLISHED IN THE DAILY ILLINI AND WILL BE MADE AVAILABLE TO ANYONE WHO IS INTERESTED.

YOUR RESPONSES WILL BE COMBINED INTO GROUP RESULTS AND ARE TO BE USED SOLELY FOR RESEARCH. THEREFORE, NO NAMES OR I.D. NUMBERS ARE WANTED. TAKE THE BROWN ANSWER SHEET WHICH SAYS 60-15 AT THE TOP, AND BLACKEN THE RESPONSE WHICH CORRESPONDS TO YOUR ANSWER IN THE ITEM PORTION OF THE SHEET. MAKE ALL YOUR MARKS ON THE ANSWER SHEET.

1. WHAT IS YOUR BEST ESTIMATE OF THE TOTAL INCOME LAST YEAR OF YOUR PARENTAL FAMILY (BEFORE TAXES)?

A. LESS THAN $4,000	(2)	D. $8,000-$9,999	(11)	G. $20,000-$25,999	(14)
B. $4,000-$5,999	(3)	E. $10,000-$13,999	(24)	H. $26,000-$32,000	(5)
C. $6,000-$7,999	(5)	F. $14,000-$19,999	(25)	I. OVER $32,000	(6)

2. WHAT IS YOUR BEST ESTIMATE OF THE AVERAGE YEARLY PARENTAL FAMILY INCOME OF THIS YEAR'S U. OF I. ENTERING FRESHMEN CLASS?

A. LESS THAN $4,000	(0)	D. $8,000-$9,999	(16)	G. $20,000-$25,999	(6)
B. $4,000-$5,999	(0)	E. $10,000-$13,999	(39)	H. $26,000-$32,000	(1)
C. $6,000-$7,999	(3)	F. $14,000-$19,999	(29)	I. OVER $32,000	(0)

3. MARIJUANA SHOULD BE LEGALIZED.

A. AGREE (49) B. DISAGREE (46)

4. WHAT PERCENTAGE OF THE U. OF I. ENTERING FRESHMEN CLASS DO YOU THINK WOULD LIKE TO SEE MARIJUANA LEGALIZED?

A. 0 - 9%	(3)	D. 50 - 74%	(31)
B. 10 - 24%	(14)	E. 75 - 89%	(16)
C. 25 - 49%	(29)	F. 90 - 100%	(3)

5. CONTROLLING POLLUTION SHOULD BE A PRIME CONCERN OF THE U.S. FEDERAL GOVERNMENT.

A. STRONGLY AGREE (71) B. AGREE (21) C. DISAGREE (2) D. STRONGLY DISAGREE (1)

6. ALL INTERNAL COMBUSTION ENGINE VEHICLES SHOULD BE BANNED FROM THE HIGHWAYS IN ORDER TO PREVENT FURTHER AIR POLLUTION.

A. STRONGLY AGREE (11) B. AGREE (31) C. DISAGREE (44) D. STRONGLY DISAGREE (10)

7. WHAT PERCENTAGE OF THE ENTERING FRESHMEN CLASS DO YOU FEEL WOULD LIKE TO SEE ALL INTERNAL COMBUSTION ENGINE VEHICLES BANNED FROM THE HIGHWAYS TO PREVENT AIR POLLUTION?

A. 0 - 9%	(27)	D. 50 - 74%	(11)
B. 10 - 24%	(29)	E. 75 - 89%	(5)
C. 25 - 49%	(23)	F. 90 - 100%	(2)

8. ONLY VOLUNTEERS SHOULD SERVE IN THE ARMED FORCES.

A. AGREE (64) B. DISAGREE (28)

9. WHAT PERCENTAGE OF THE ENTERING FRESHMEN CLASS DO YOU FEEL WOULD AGREE THAT ONLY VOLUNTEERS SHOULD SERVE IN THE ARMED FORCES?

A. 0 - 9%	(2)	D. 50 - 74%	(27)
B. 10 - 24%	(6)	E. 75 - 89%	(29)
C. 25 - 49%	(18)	F. 90 - 100%	(12)

10. WHAT OTHER QUESTIONS WOULD YOU LIKE TO SEE DATA GATHERED ON IN THIS FASHION? WRITE ON THE BACK OF YOUR ANSWER SHEET.

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*The percentage of students responding is indicated in the parentheses following each alternative.

Appendix B

Percentage of Students Responding to the Second Question
When Divided According to Their Responses on the First

3. Marijuana should be legalized.

4. What percentage of the U. of I. entering freshmen class do you think would like to see marijuana legalized?

Response	Agree	Disagree
A. 0 - 9%	0	6
B. 10 - 24%	4	24
C. 25 - 49%	24	38
D. 50 - 74%	41	24
E. 75 - 89%	26	7
F. 90 - 100%	5	1
Mean	4.04	3.04
SD	.95	1.01
N	2,153	1,991

Z = 32.7869, significant beyond the .01 level.

6. All internal combustion engines should be banned from the highways in order to prevent further air pollution.

7. What percentage of the U. of I. entering freshmen class do you feel would like to see all internal combustion engine vehicles banned from the highways to prevent air pollution?

Response	Strongly Agree	Agree	Disagree	Strongly Disagree
A. 0 - 9%	12	8	37	63
B. 10 - 24%	20	23	38	27
C. 25 - 49%	23	36	18	7
D. 50 - 74%	22	22	5	1
E. 75 - 89%	15	9	1	0
F. 90 - 100%	8	2	0	1
Mean	3.31	3.06	1.95	1.53
SD	1.45	1.14	.96	.89
N	486	1,353	1,928	426

F = 486.27, significant beyond the .01 level.

8. Only volunteers should serve in the armed forces.

9. What percentage of the entering freshmen class do you feel would agree that only volunteers should serve in the armed forces?

Response	Agree	Disagree
A. 0 - 9%	2	3
B. 10 - 24%	3	13
C. 25 - 49%	13	32
D. 50 - 74%	27	31
E. 75 - 89%	37	17
F. 90 - 100%	17	3
Mean	4.47	3.55
SD	1.12	1.10
N	2,795	1,224

Z = 24.2744, significant beyond the .01 level.